



Status of PI-led Science Programs

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Lessons Learned Workshop for
PI-led Planetary Science Missions
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PI-led Science Programs

- Discovery
- Explorer
- ESSP
- Mars Scout
- New Frontiers

Some characteristics

- Selected from openly solicited, peer reviewed proposals
 - Competition of science objectives as well as technical implementation and responsible team
- Complete team assembled by a Principal Investigator
 - PI and team responsible to NASA for success of mission
- Mission costs capped
 - PI-led team optimizes mission within cost cap



PI-led Science Programs

- Discovery – 8 launched (1 failure), 2 in development
- Explorer – 12 launched (1 failure), 4 in development
- ESSP – 1 launched, 2 on launch pad, 2 in development
- Mars Scout – 1 in development
- New Frontiers – 1 launched, 1 in development

Total

- 22 launched (2 failures)
- 2 on launch pad
- 10 in development

... at least 10 still operating
(partly depends on definition of operating)

N.b. Does not include Missions of Opportunity



Discovery Program



NEAR

Successfully orbited and landed on an asteroid



Lunar Prospector

Provided detailed maps of Moon's surface



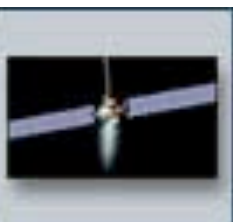
Genesis

Successfully captured solar wind and returned samples to Earth



MESSENGER

Launched August '04 to arrive on orbit at Mercury March 2011



Dawn

Mission to Ceres and Vesta. Under development.

Mars Pathfinder

Successfully landed and roved on Mars



Stardust

Successfully flew through comet's tail and returned samples to Earth



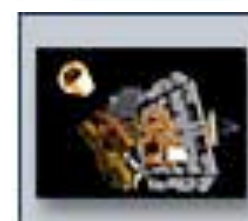
CONTOUR

Mission to comet. Lost during flight.



Deep Impact

Successfully impacted surface of comet to remotely sample interior.



Kepler

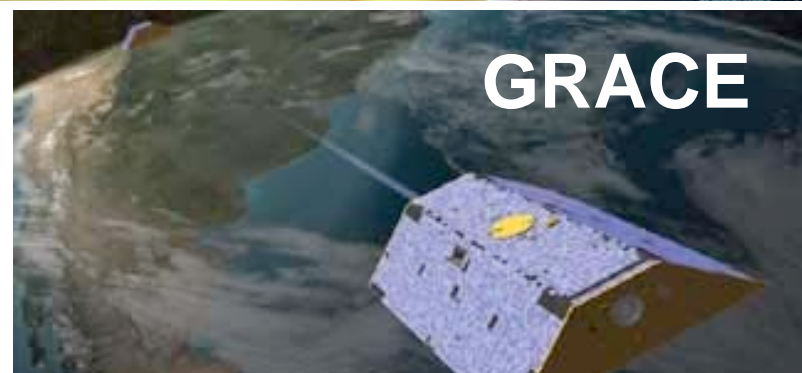
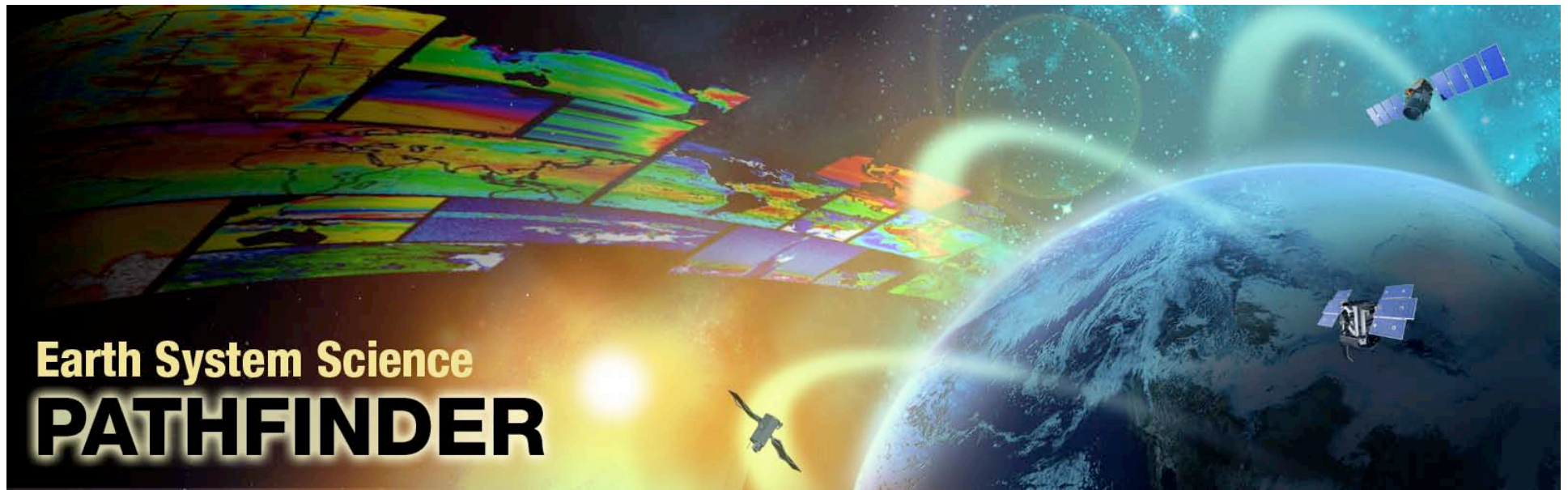
Will search for extra-solar planets. Under development.





Explorer Program









Future Opportunities

- **Discovery**
 - Budget includes development, operations, and competed data analysis program (Discovery DAP)
 - Budget approx \$270M per year (through FY08) growing to \$310M per year (in FY11)
 - 2006 AO closed April 5, cost cap \$425M (FY06)
- **Explorer**
 - Budget includes development and operations
 - Budget approx \$210M per year (FY05-FY06), \$150M per year (FY07-FY09), rebounding to \$190M per year (in FY11)
 - Next AO (MIDEX) no earlier than FY2008



Future Opportunities

- **ESSP**
 - Budget includes development and operations
 - Budget approx \$120M per year (through FY09) growing to \$200M per year (in FY11)
 - Next AO no earlier than FY2008
- **Mars Scout**
 - Budget a component of overall Mars Exploration budget
 - Next AO in spring 2006
- **New Frontiers**
 - Budget includes development and operations
 - Budget approx \$155M per year (through FY08) growing to \$250M per year (in FY10)
 - Next AO no earlier than FY2008

